

WHAT IS CLAIMED IS:

1. A rotating electric machine comprising:
a plurality of ventilating passages formed between a stator frame and a stator iron core;
coolers which cool a coolant being provided in said plurality of said ventilating passages;
a ventilating circuit in which at least a portion of the coolant which is cooled by one of said coolers is further cooled by another of said coolers, and is allowed to flow to a central portion in an axial direction of said stator iron core in a direction from an outer peripheral side to an inner peripheral side of said stator iron core at least via one ventilating passage of said plurality of ventilating passage which communicates with said central portion in the axial direction of said stator iron core.
2. A rotating electric machine according to claim 1, further comprising a booster for boosting the coolant, the ventilating circuit enabling flow of the coolant which is boosted by the booster and cooled by said cooler.
3. A rotating electric machine according to claim 1, wherein the booster includes a fan.
4. A rotating electric machine comprising:
a plurality of ventilating passages formed between a stator frame and a stator iron core;
coolers provided in said plurality of ventilating passages;
a fan for boosting a coolant;

a first ventilating circuit in which the coolant boosted by said fan is introduced from the inner peripheral side of said stator iron core into some of said ventilating passages and is cooled by some of said coolers; and

a second ventilating circuit in which the coolant boosted by said fan is cooled by some of said coolers and is allowed to flow to said stator iron core in the direction from the outer peripheral side to the inner peripheral side of said stator iron core via some of said ventilating passages;

wherein at least one, communicated to a central portion in the axial direction of said stator iron core, of said plurality of ventilating passages constitutes part of said second ventilating circuit.

5. A rotating electric machine according to claim 4, wherein said stator iron core has a plurality of ventilating ducts which continuously extend in the radial direction and which are arranged in the axial direction; and

axial intervals between those, constituting part of said second ventilating circuit, of said ventilating ducts are smaller than axial intervals between those, constituting part of said second ventilating circuit, of said ventilating ducts.

6. A rotating electric machine in which the inside of said machine is cooled by atmospheric air sucked from outside said machine, comprising:

a plurality of ventilating passages formed between a stator frame and a stator iron core;

a fan for boosting a coolant;

a first ventilating circuit in which the atmospheric air boosted by said fan is introduced from the inner peripheral side of said stator iron core into some of said ventilating passages; and

a second ventilating circuit in which the atmospheric air boosted by said fan is allowed to flow to said stator iron core in the direction from the outer peripheral side to the inner peripheral side of said stator iron core via some of said ventilating passages;

wherein a cooler is provided at least in one, which constitutes part of said second ventilating circuit and which is communicated to a central portion in the axial direction of said stator iron core, of said plurality of ventilating passages.

7. A rotating electric machine according to claim 6, wherein said stator iron core has a plurality of ventilating ducts which continuously extend in the radial direction and which are arranged in the axial direction; and

axial intervals between those, constituting part of said second ventilating circuit, of said ventilating ducts are smaller than axial intervals between those, constituting part of said second ventilating circuit, of said ventilating ducts.